

# What are “Village Center Design Principles”?



Amherst Planning Department  
December 8, 2015  
North Amherst Intersection  
Forum # 2





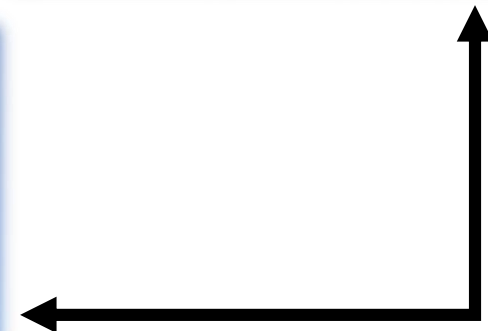
Pedestrians



Automobiles



Built environment



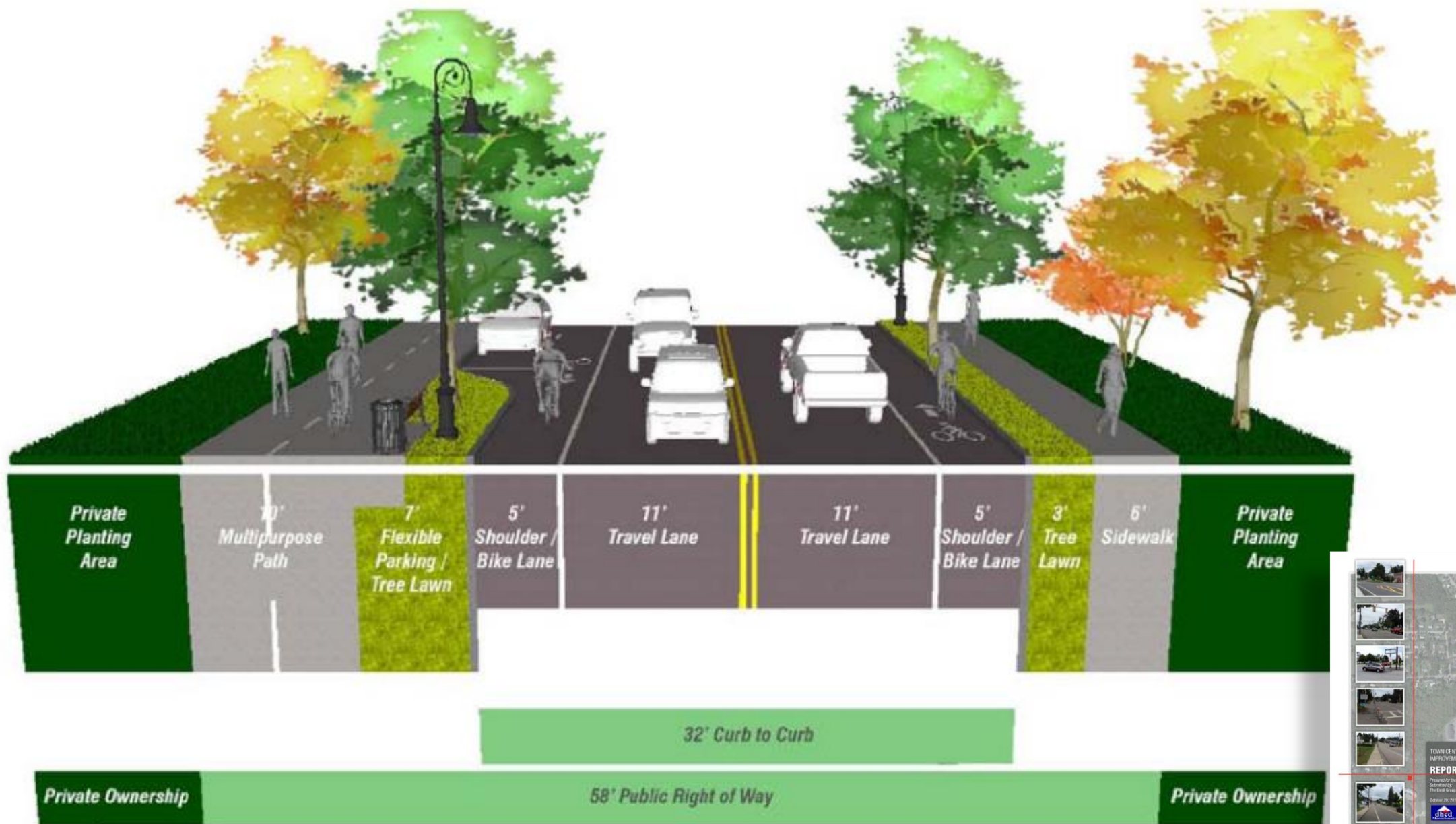


Figure 15 - Proposed Section: Multi-purpose and recreational linkage

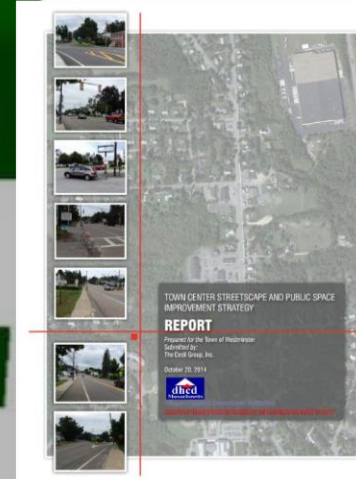




FIGURE 16.2.1 - STREET TYPES - COMMERCIAL/CIVIC STREET TYPE

Cross Section/Perspective View

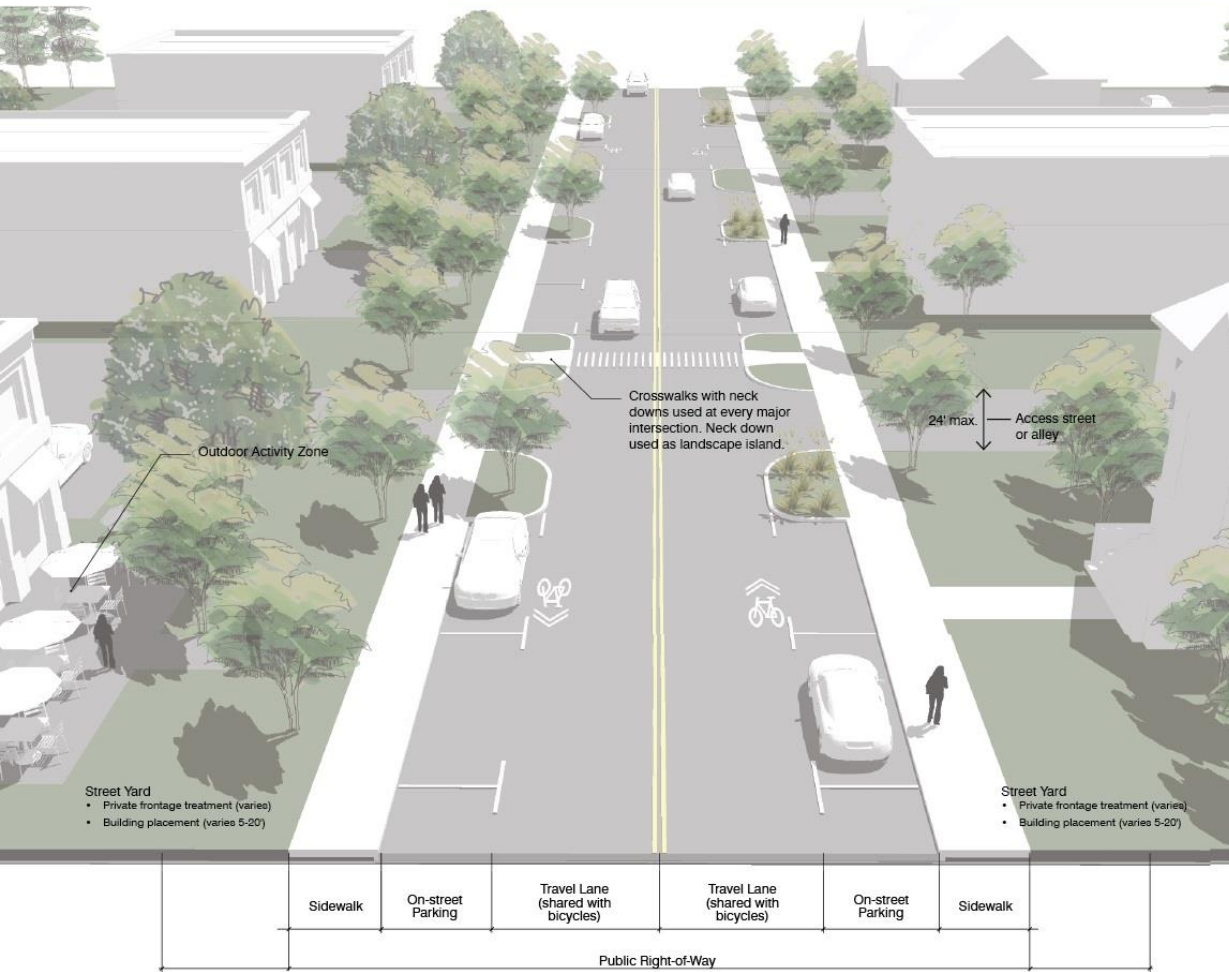
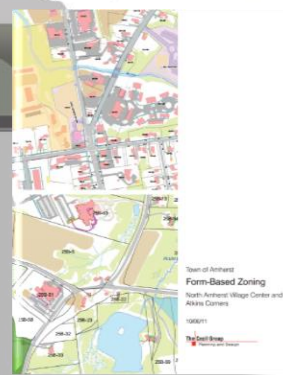
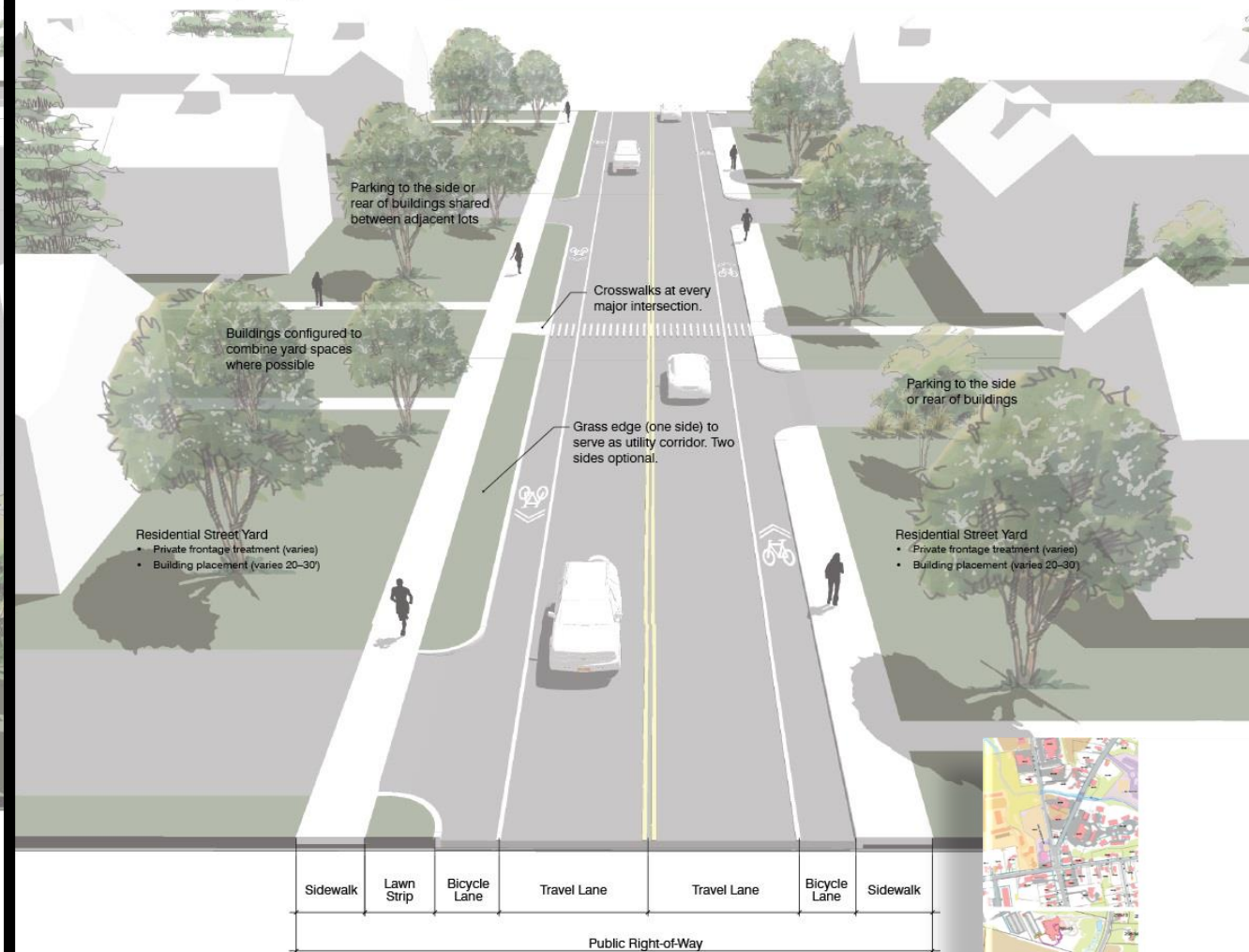


FIGURE 16.2.1 - STREET TYPES - VILLAGE RESIDENTIAL STREET TYPE

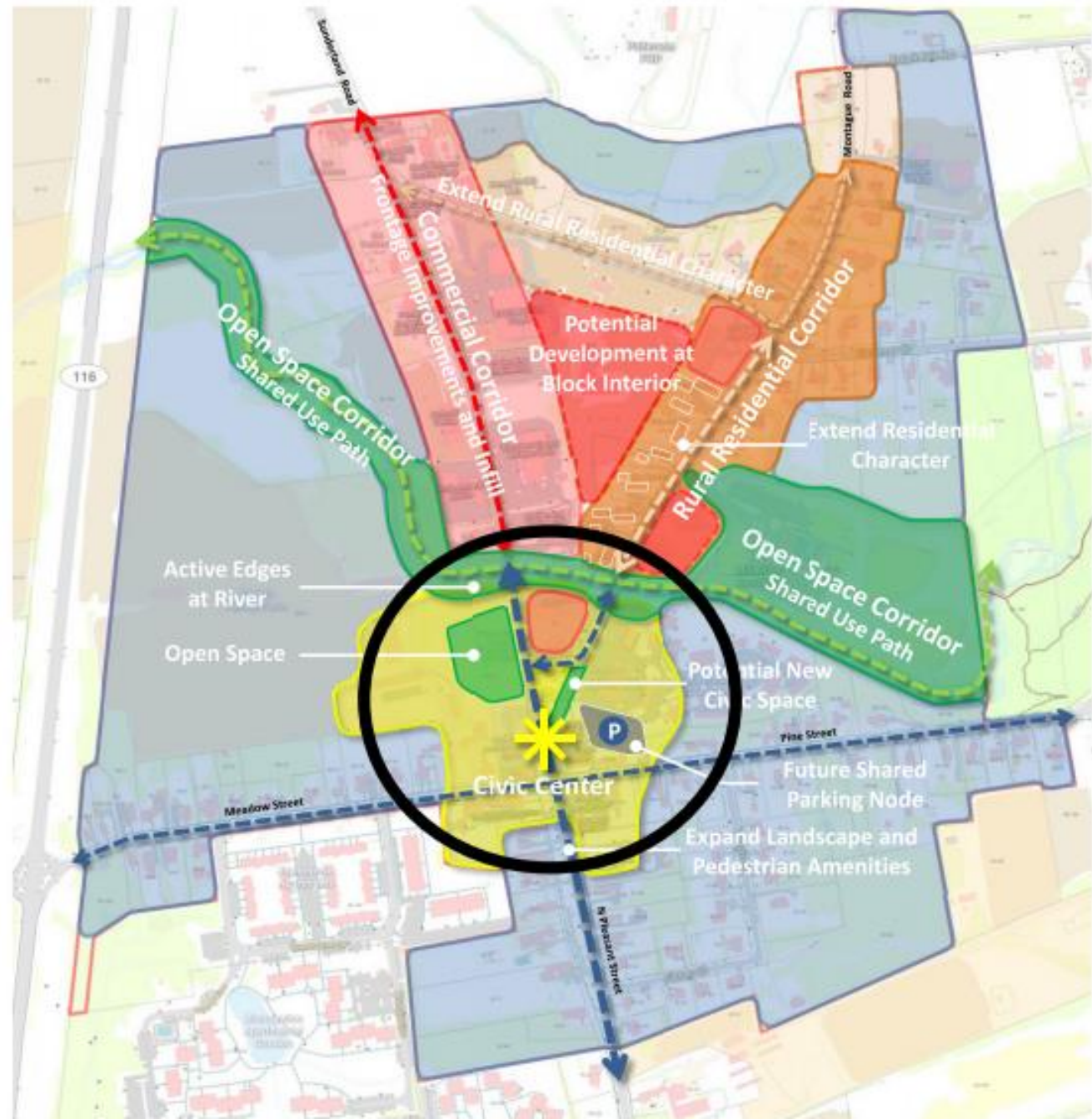
Cross Section/Perspective View



# Why look at intersections?

- 2010 Master Plan
  - Update traffic controls
  - Adjust circulation patterns
  - Apply traffic calming measures
  - Improve road signs
  - Adopt “complete streets” policy
- 2011 Cecil group charrette
- 2015 Transportation Plan

## North Amherst Village Center Concept Plan







## **AMHERST TRANSPORTATION PLAN**

**April 2015**

# Intersection Redesign

Intersection redesigns are intended to provide greater parity to all users of the street network. Intersection redesigns can be used to make pedestrian crossings safer, to make left turns on bike more obvious to other users, and to better situate bus stops in reference to traffic.

## Amherst Today

Amherst’s intersections are generally designed primarily with cars in mind. While pedestrian crossings and bicycle infrastructure have been installed throughout the town, for the most part these amenities have been tailored to fit the auto-oriented streets.

## Needs

Throughout Amherst pedestrian crossings do not take the shortest or most convenient route across a roadway, requiring pedestrians to deviate from their desire line. Meanwhile, signals are often timed to clear a queue, resulting in long queues on all approaches and long pedestrian delays.

## Opportunities

Simple signal timing changes and intersection geometry changes can make operations more efficient and safer for all modes. Amherst’s success with roundabouts is a demonstration of this potential.



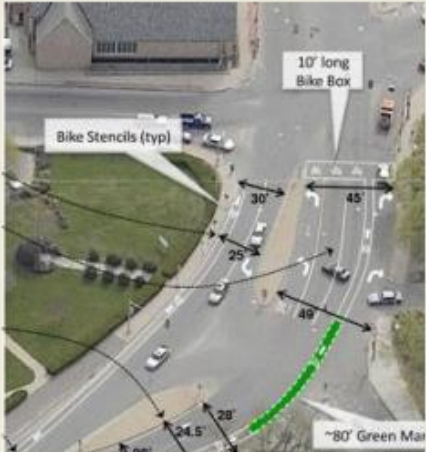
Traffic roundabout in Glens Falls, NY

## Next Steps

1. Identify intersections in Amherst that are difficult for users to navigate, no matter the mode.
2. Establish priorities for intersection redesign.
3. Coordinate intersection redesigns with other projects in the town.

## BEST PRACTICE – Northampton, MA

In response to the deaths of a student and a local resident attempting to cross State Routes 9 and 10, Northampton sought a means to redesign the large intersection of Main, Elm, State, and New South Streets by the Academy of Music. The redesign incorporates a reduced cross-section, raised slip lanes, and reduced crosswalk distances while reducing vehicle and pedestrian delays.



State Route 9, Northampton MA

Rendering: Nelson\Nygaard

### Walking strategies

- Pedestrian enhancement program
- Sidewalk gap program
- Walk to school program
- Traffic calming program
- Permit standards for walkability
- Crosswalk specifications

### Bicycle strategies

- Bike network plan
- Bicycle infrastructure accommodations at intersections
- Bike education program
- Bike share
- Trail and conservation area connections
- Bike rack standards
- Bike repair stations
- Bike lane maintenance protocol

### Transit strategies

- Bike racks at transit stations
- Transit stop enhancements
- Real time transit information
- Local transit plan
- Transit signal priority
- Fixed guide way transit plan

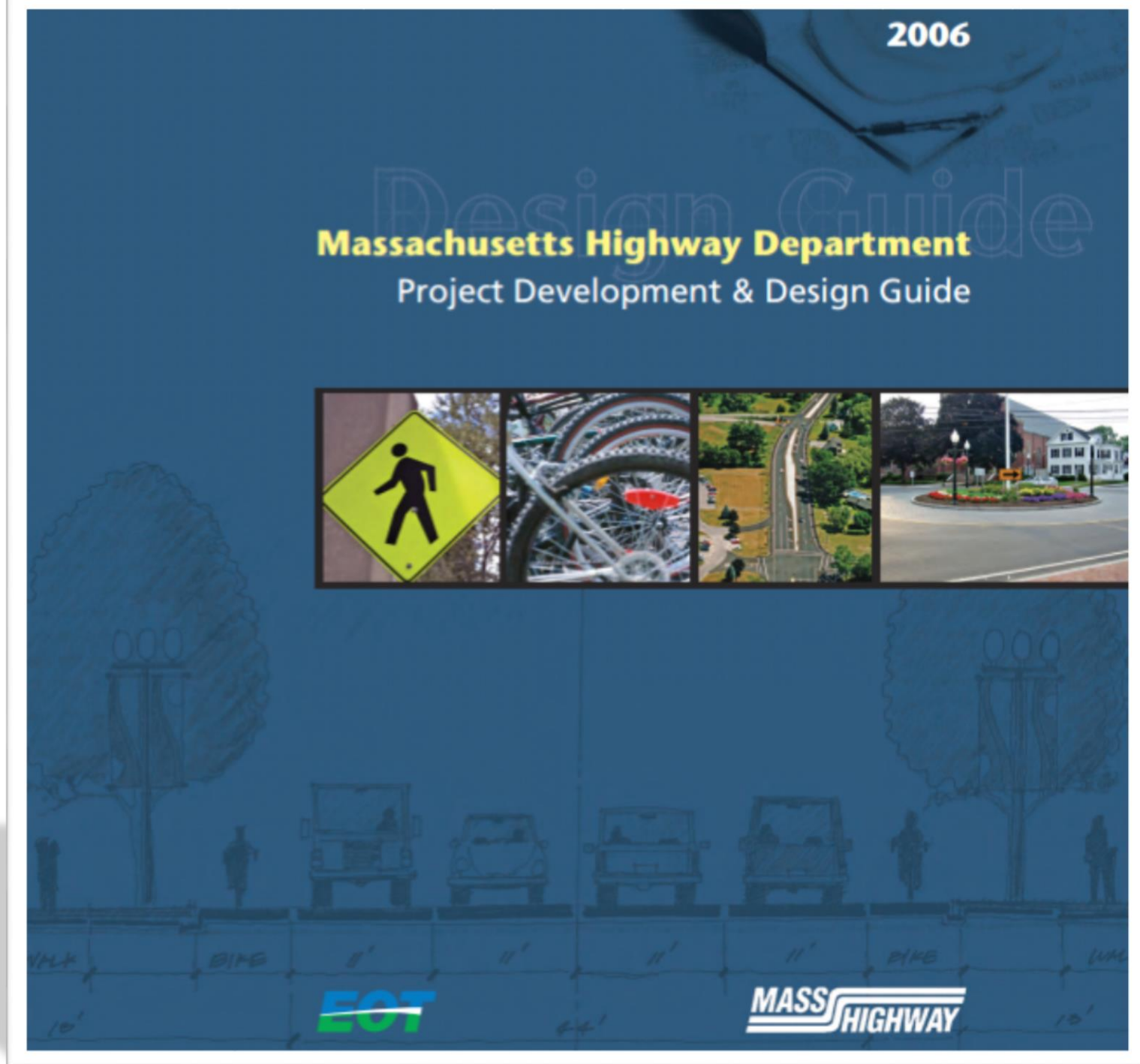
### Driving strategies

- Establish signal timing standards
- Intersection redesign
- Enhanced pavement management program
- Revised parking standards
- Car share expansion
- Vanpool/carpool program
- Unbundled parking
- Demand-Based pricing
- Event management program
- Remote parking incentive
- Parking benefit district
- Remote parking walk connections and wayfinding
- Shared parking district
- Parking utilization data program
- Commercial loading zone regulations



# Automobiles

- Intersection users:
  - Pedestrians
  - Bicyclists
  - Motor vehicles
  - Transit

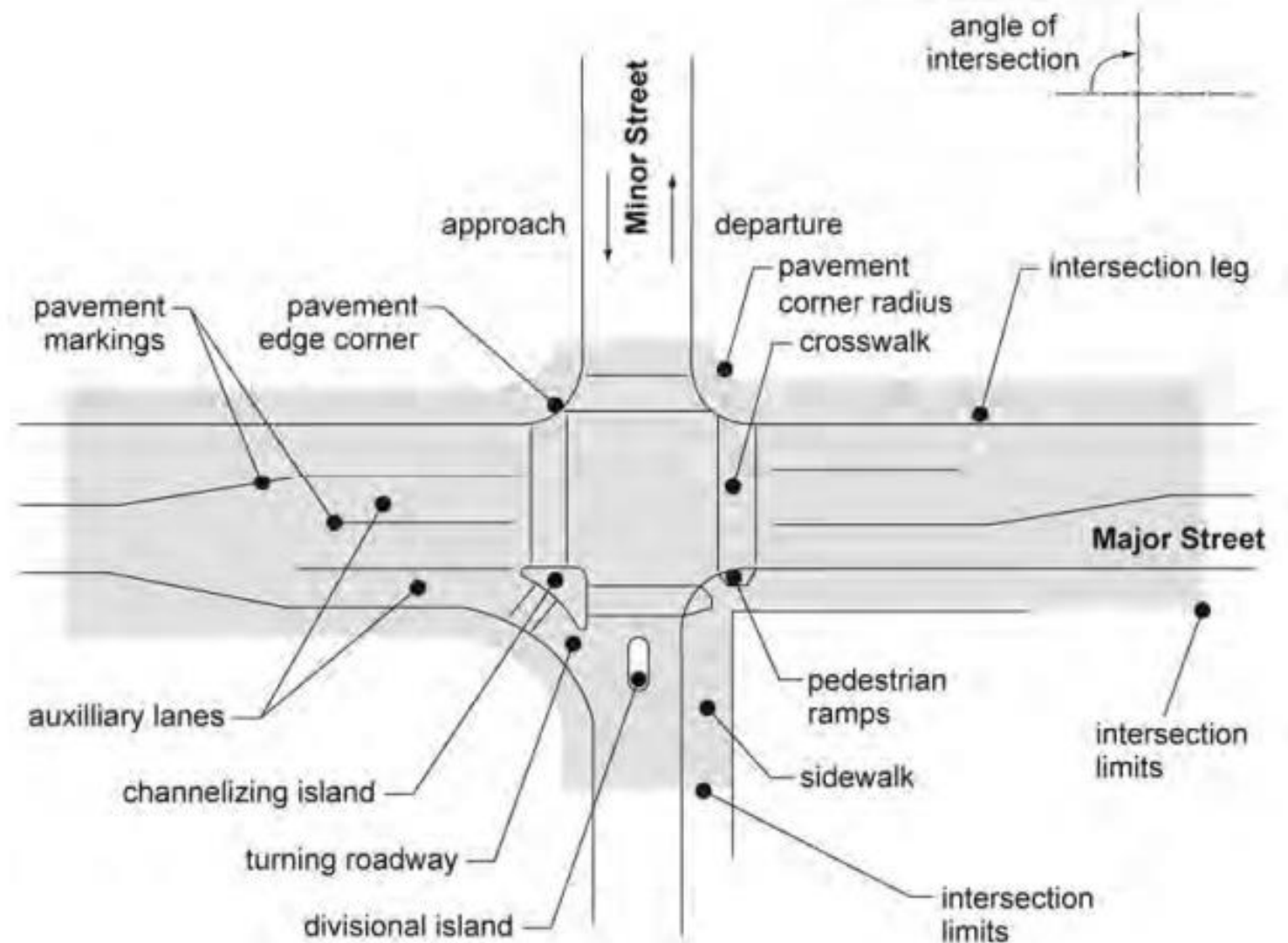




# Traffic calming

Physical road design elements intended to reduce vehicle speeds and improve driver attentiveness

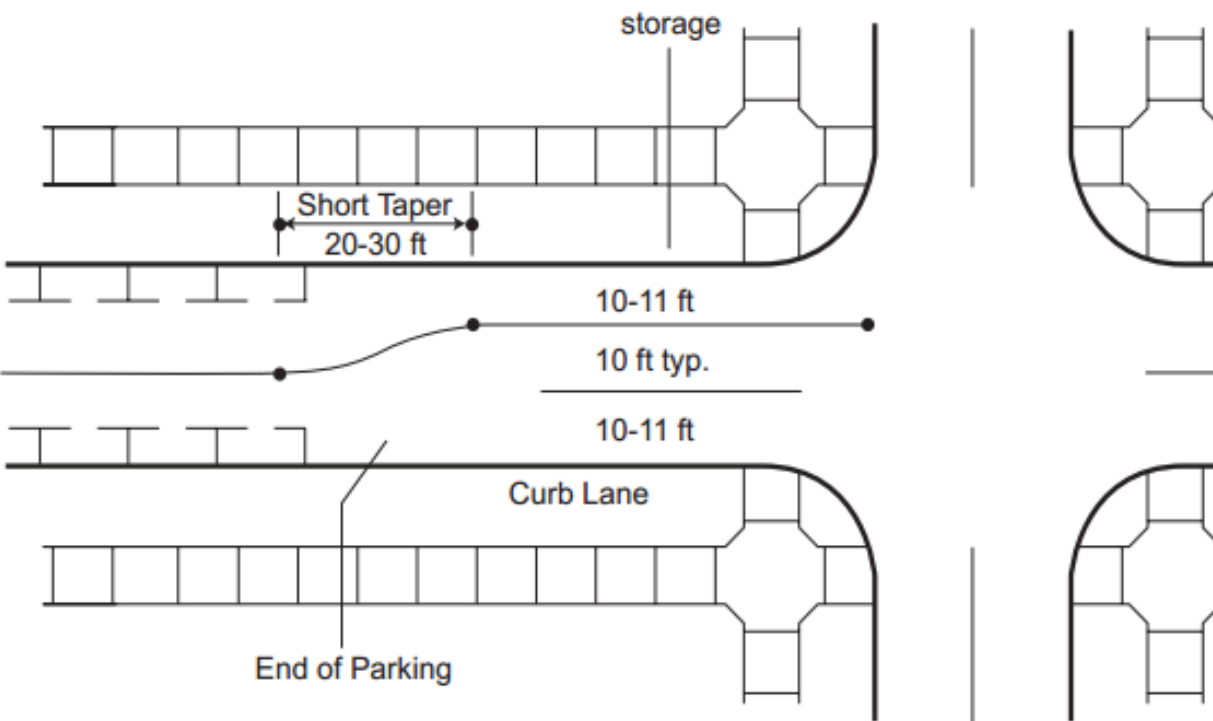
**Exhibit 6-1**  
**Intersection Terminology**



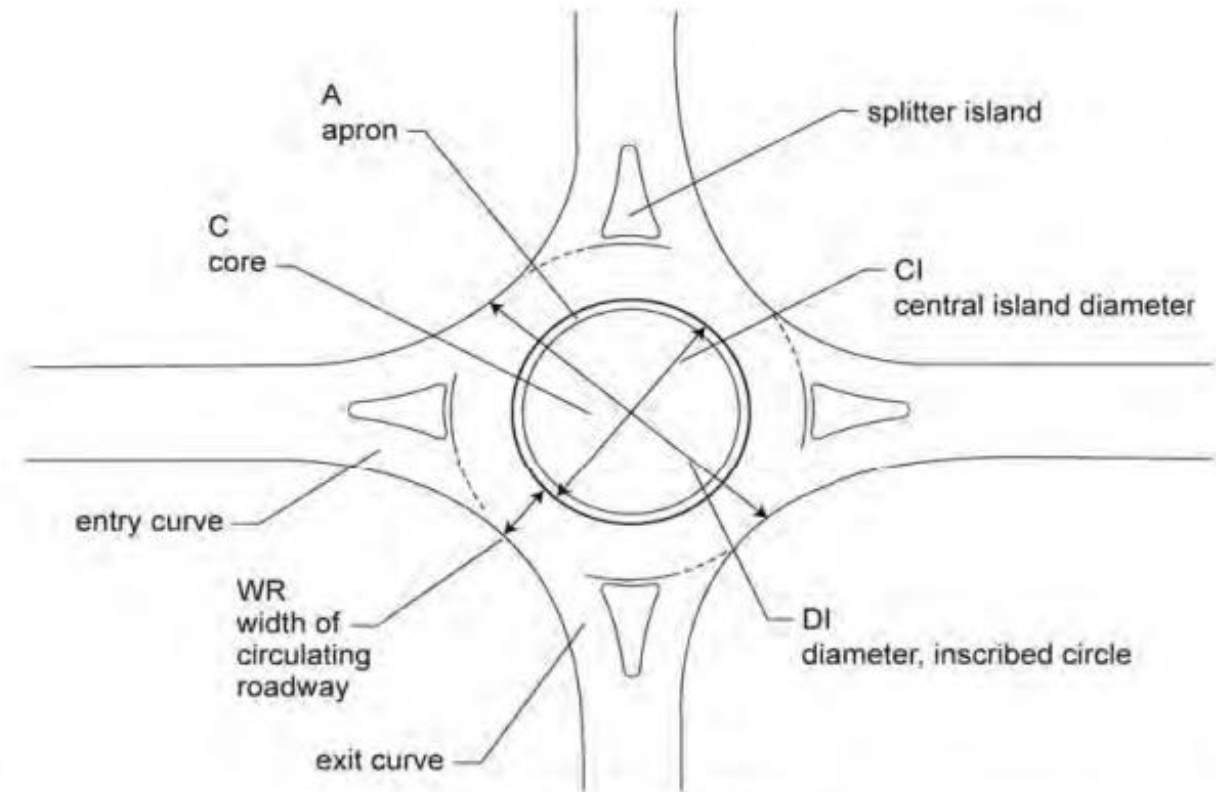
Source: Adapted from A Policy on the Geometric Design of Streets and Highways, AASHTO, 2004.

# Traffic calming example

**Exhibit 16-11**  
**Left-turn Lanes, Traffic Calming Values**



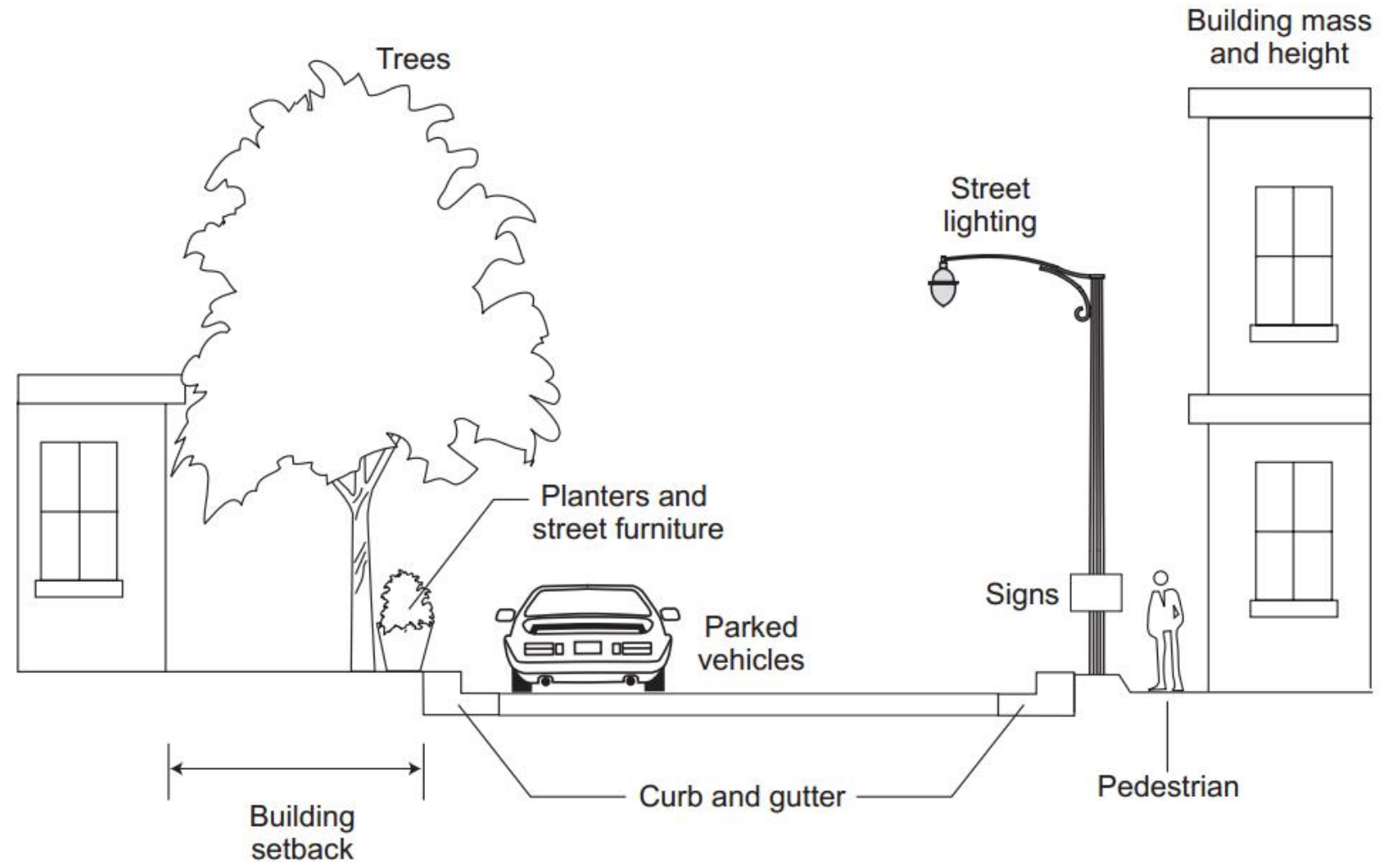
**Exhibit 6-27**  
**Circle Dimensions, Single Lane Roundabout**





# Traffic calming example

**Exhibit 16-3**  
**Elements of Apparent Street Width**



Source: MassHighway

# Traffic calming example

- Narrow lanes
- Raised curbs
- Street furniture
- Street lighting
- Building placement
- On-street parking
- Short medians
- Roundabout
- Raised crosswalks
- Textured pavement



Summer St., Arlington



# Traffic calming example



Cambridge: Before



Cambridge: After



# Pedestrians

## Streetscape elements:

- Connectivity
- Lighting
- Amenities
- Access management
- Parking
- Landscaping

December 2001



## Amherst Town Center Streetscape Design Guidelines Manual

*Prepared for:*

### **Amherst Planning Department**

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*Prepared by:*

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PAVING ENHANCEMENTS



Combination Bike Lane / Sharrow



Stamped Crosswalk



Dual Sharrow Infrastructure



Stamped Crosswalk



Painted Bike Lane



Painted Areas

STREETSCAPE FURNISHING



Decorative Metal Bench



Decorative Wooden Bench



Modular Benches



Artistic Bike Rack



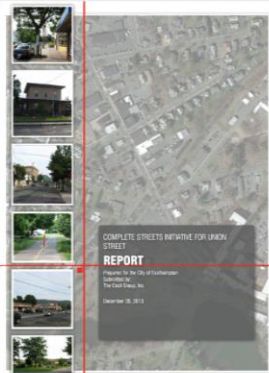
Standard Bike Rack



Retrofitted Bike Rack



Wayfinding Signage





## OPEN SPACE ENHANCEMENTS



Open Space Enhancements



Open Space Enhancements



Community Signage



Landscape Enhancements at Crosswalk



Private Parking Buffer



Private Parking Buffer

## TRAFFIC CALMING



Landscaped Curb Extensions



Mid Block Crossing



Chicane



Painted Intersection



Hardscaped Intersection



Community Inspired Intersection





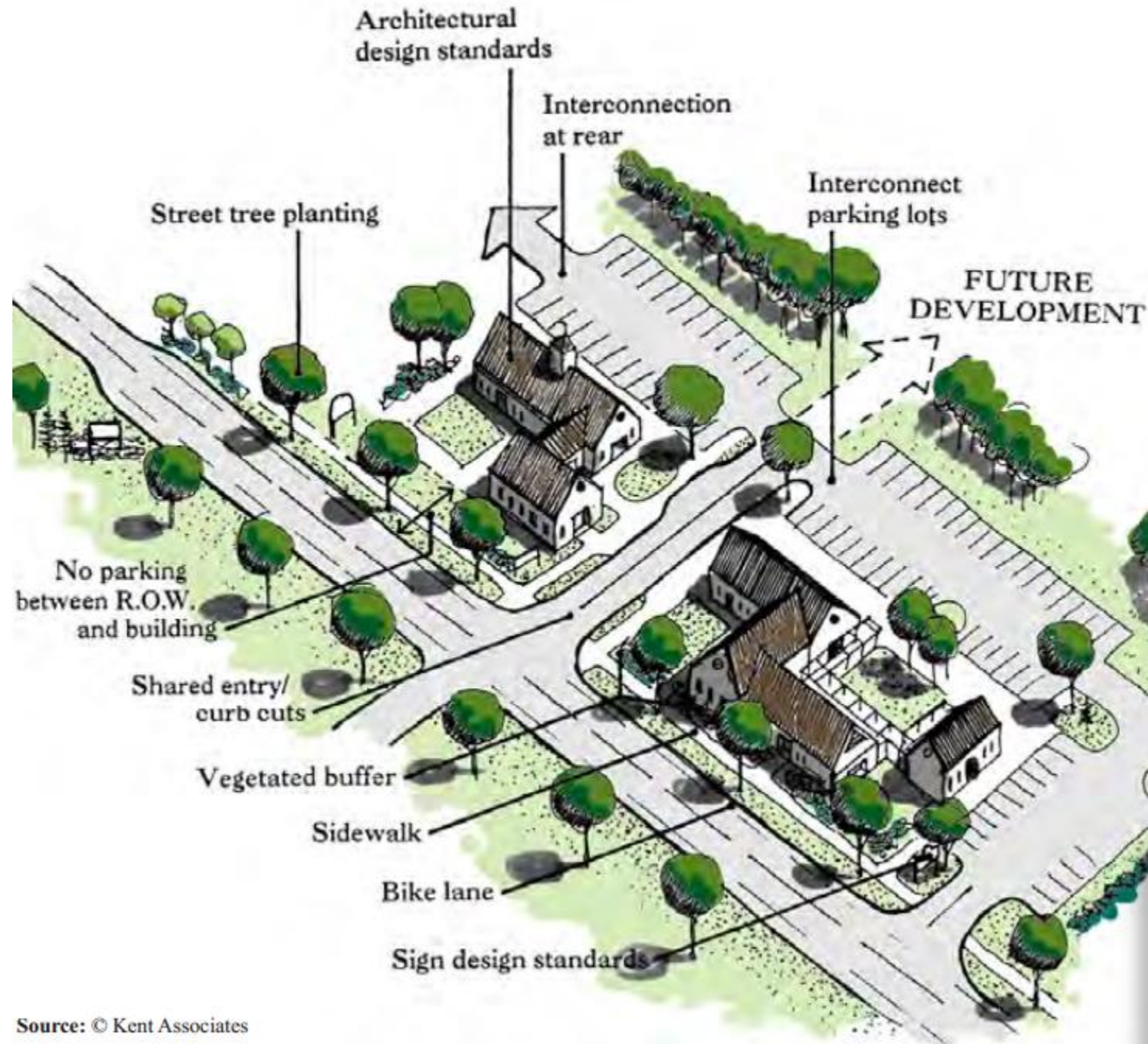
Streetscape example: Easthampton





# The Built Environment

- Location
- Architecture
- Access management
- Zoning
- Parking



Source: © Kent Associates

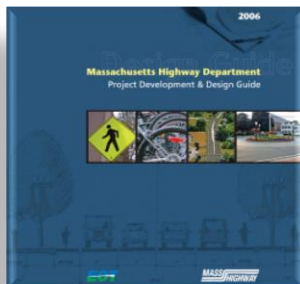


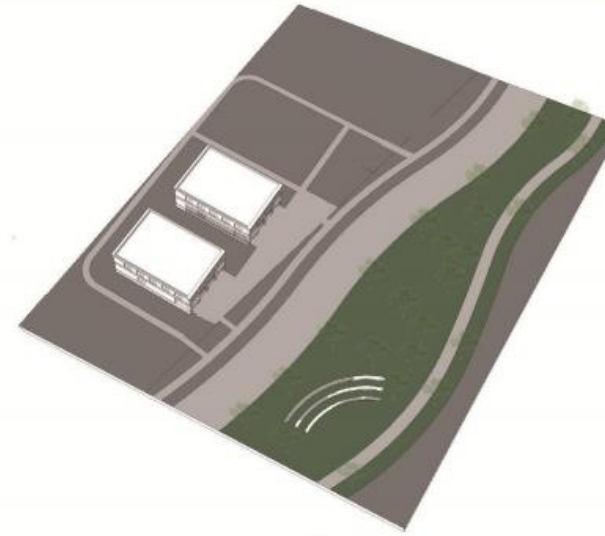


FIGURE 16.5.1 - PUBLIC AND PRIVATE OPEN SPACE TYPES

### Park

A natural preserve available for unstructured recreation. A park may be independent of surrounding building frontages. Its landscape shall consist of paths and trails, meadows, woodland and open shelters, all naturalistically disposed. Parks in the FBD are likely to be linear, following the natural corridor along water courses. The linear park should connect to surrounding neighborhoods and civic centers.

#### Character Examples:

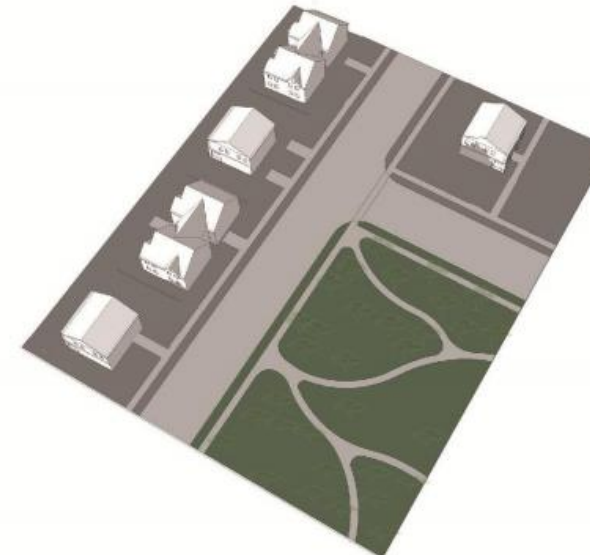


The illustrations of Figure 16.5.1 represent one possible solution, exact conditions may vary, proposals shall meet the intent shown.

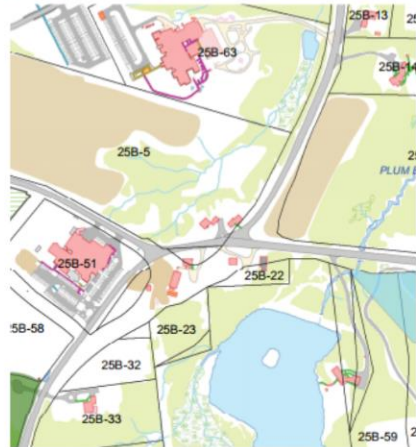
### Green

An open space, available for unstructured recreation. A green or common may be spatially defined by landscaping rather than building frontages. Its landscape shall consist of lawn and trees, naturalistically disposed.

#### Character Examples:



The illustrations of Figure 16.5.1 represent one possible solution, exact conditions may vary, proposals shall meet the intent shown.



Town of Amherst  
**Form-Based Zoning**  
North Amherst Village Center and  
Atkins Corners

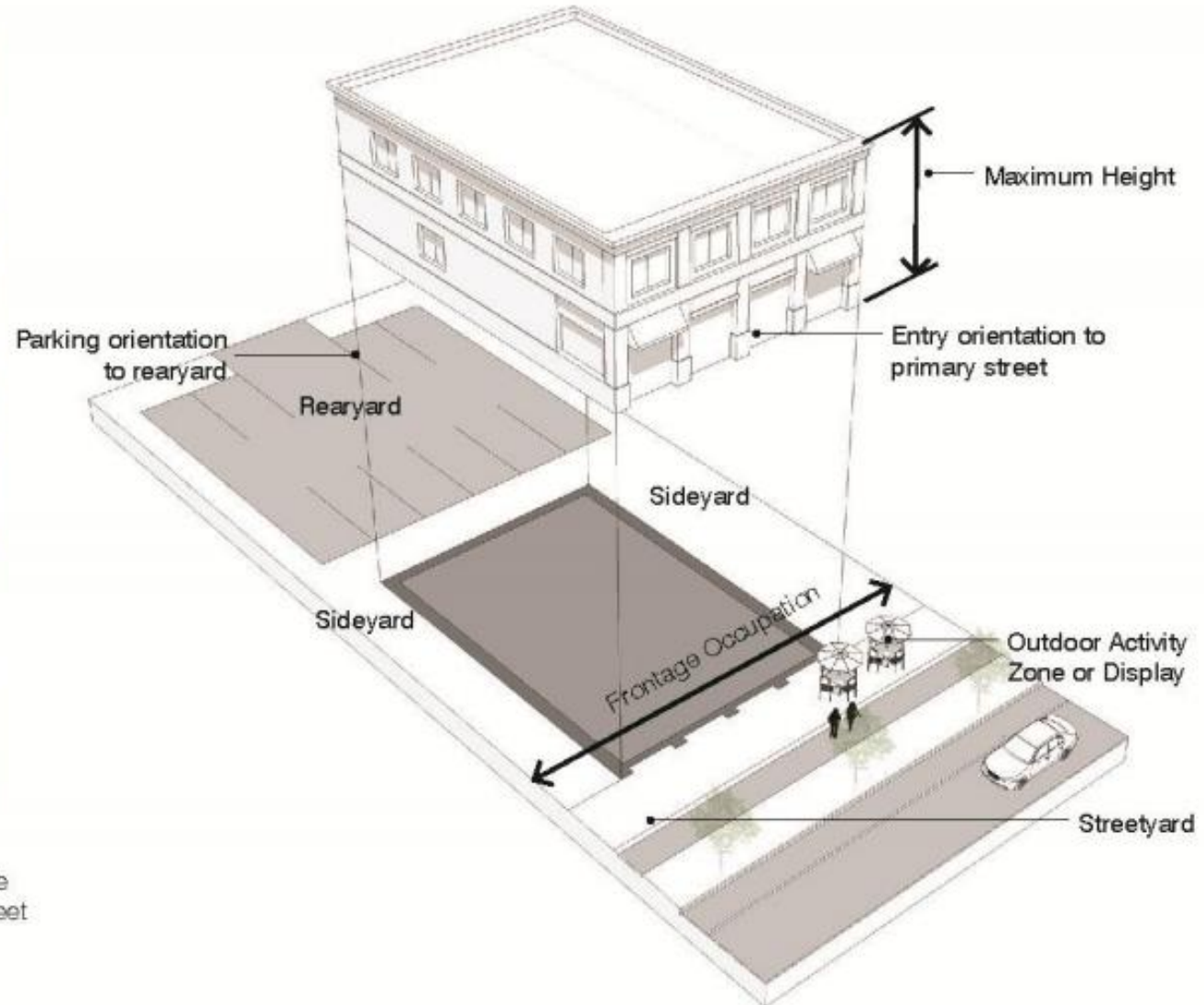
10/06/11

**The Cecil Group**  
Planning and Design

## FIGURE 16.3.1 - BUILDING AND SITE TYPES

### Mixed Use Building and Site Type

Character Examples:



The illustrations of Figure 16.3.1 represent one possible solution, exact conditions may vary; proposals shall meet the intent shown.





# Urban Form Analysis

and Model Form-Based Regulations

*Amherst, Massachusetts*



Prepared By  
ACP-Visioning & Planning, Ltd.

Prepared with Support From  
Office of Energy and Environmental Affairs  
Smart Growth Technical Assistance Grant

September 4, 2007



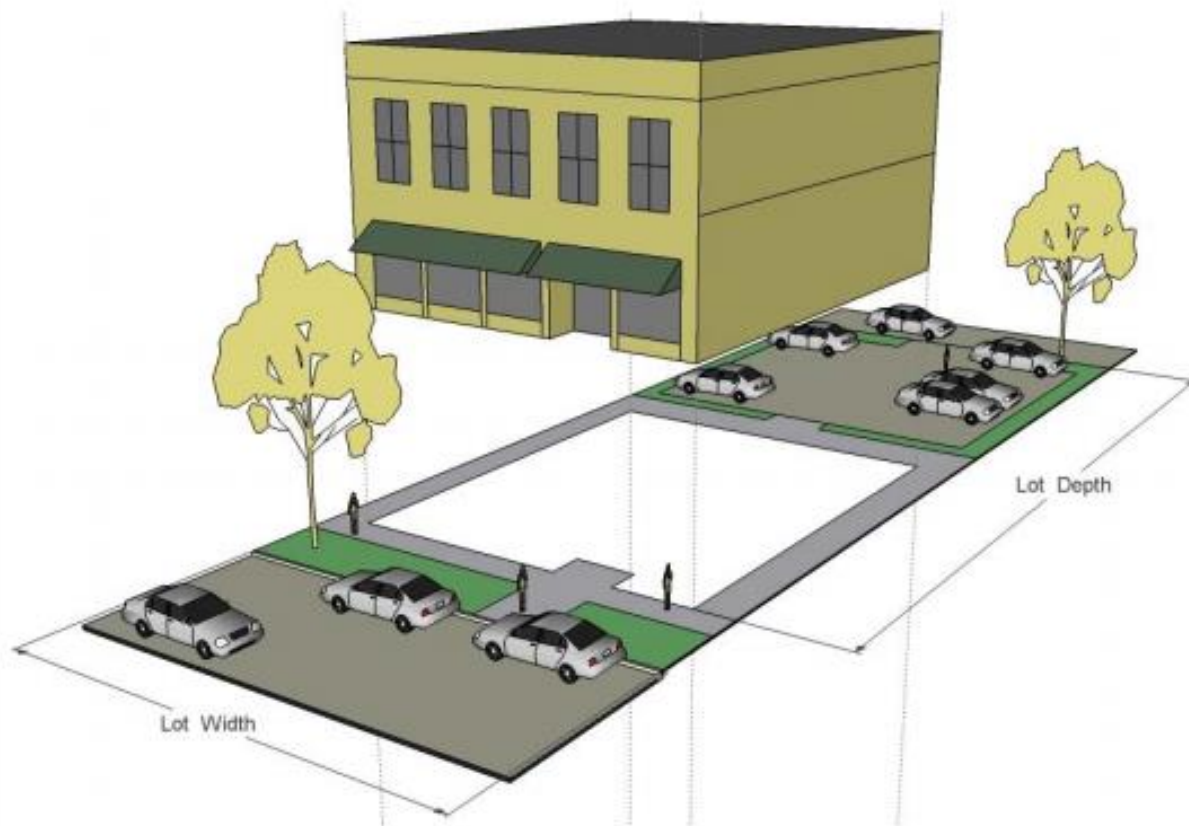
## Civic Space Lot



## Character Examples



## Village Blockfront Lot (VBF)



## Character Examples





ARCHITECTURAL PRINCIPLES



Belchertown strongly encourages commercial development that follows traditional New England standards and should be designed to human scale

Alterations to existing structures should be proportioned to match the form, colors, and details of the original structure



EXAMPLES

- A New England Colonial Revival
- B Georgian Revival
- C Federal Revival
- D Classic Revival
- E Victorian
- F Cape Cod Vernacular

ENCOURAGED

STREET CORNERS



Buildings located on corners are particularly important because they help define the character of two streets. These high-visibility locations should be emphasized by quality architecture and site development.

EXAMPLES

- A Main entrance located on major street
- B Dynamic focal points in the streetscape



ENCOURAGED

